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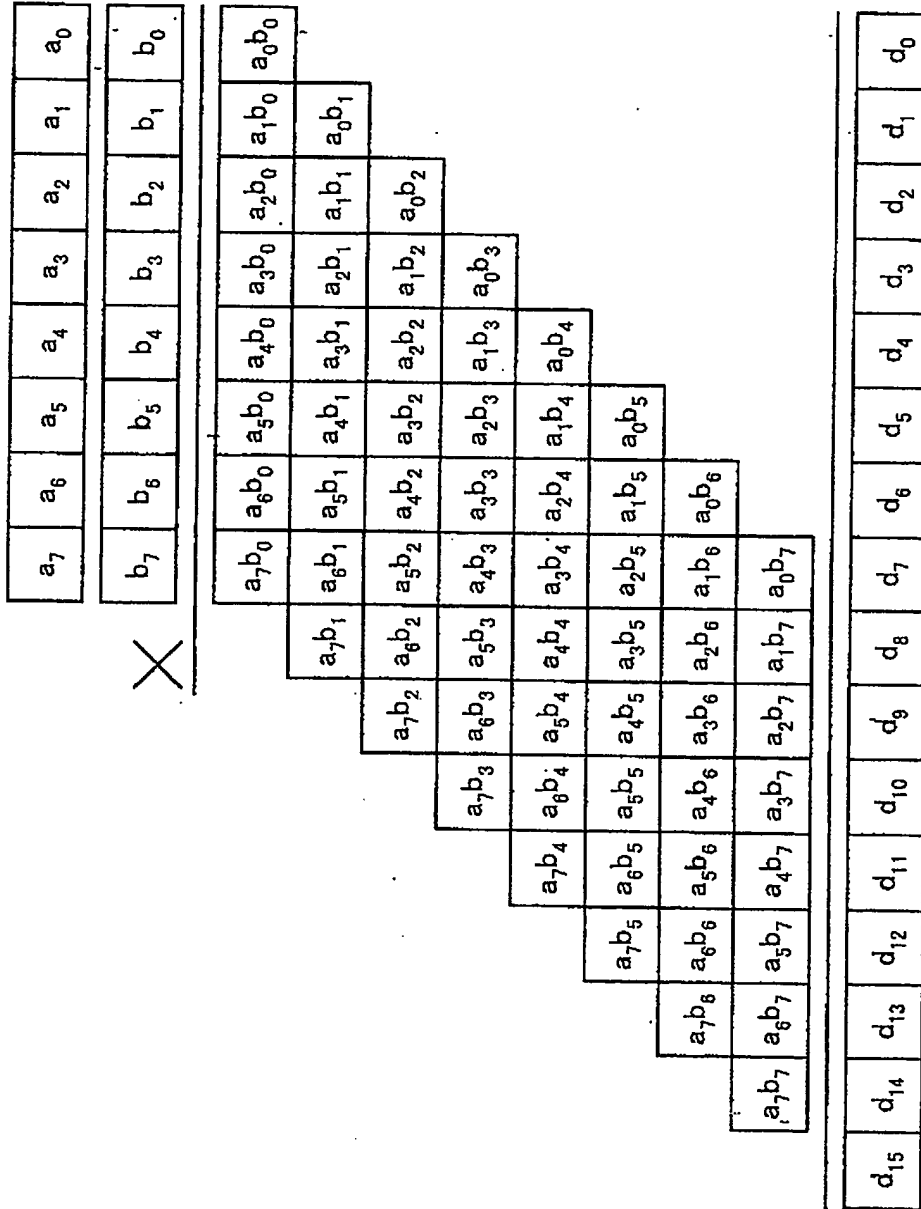
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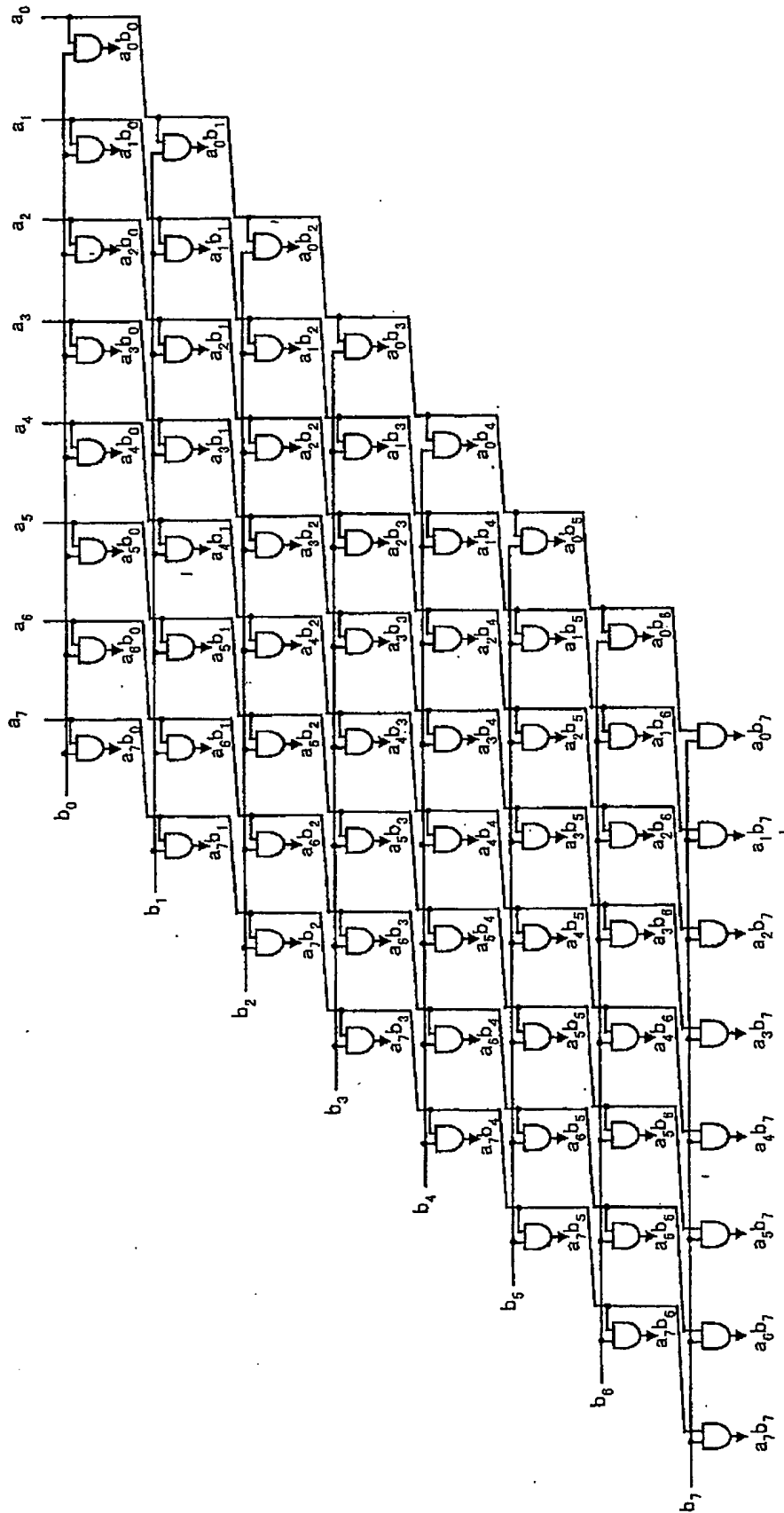
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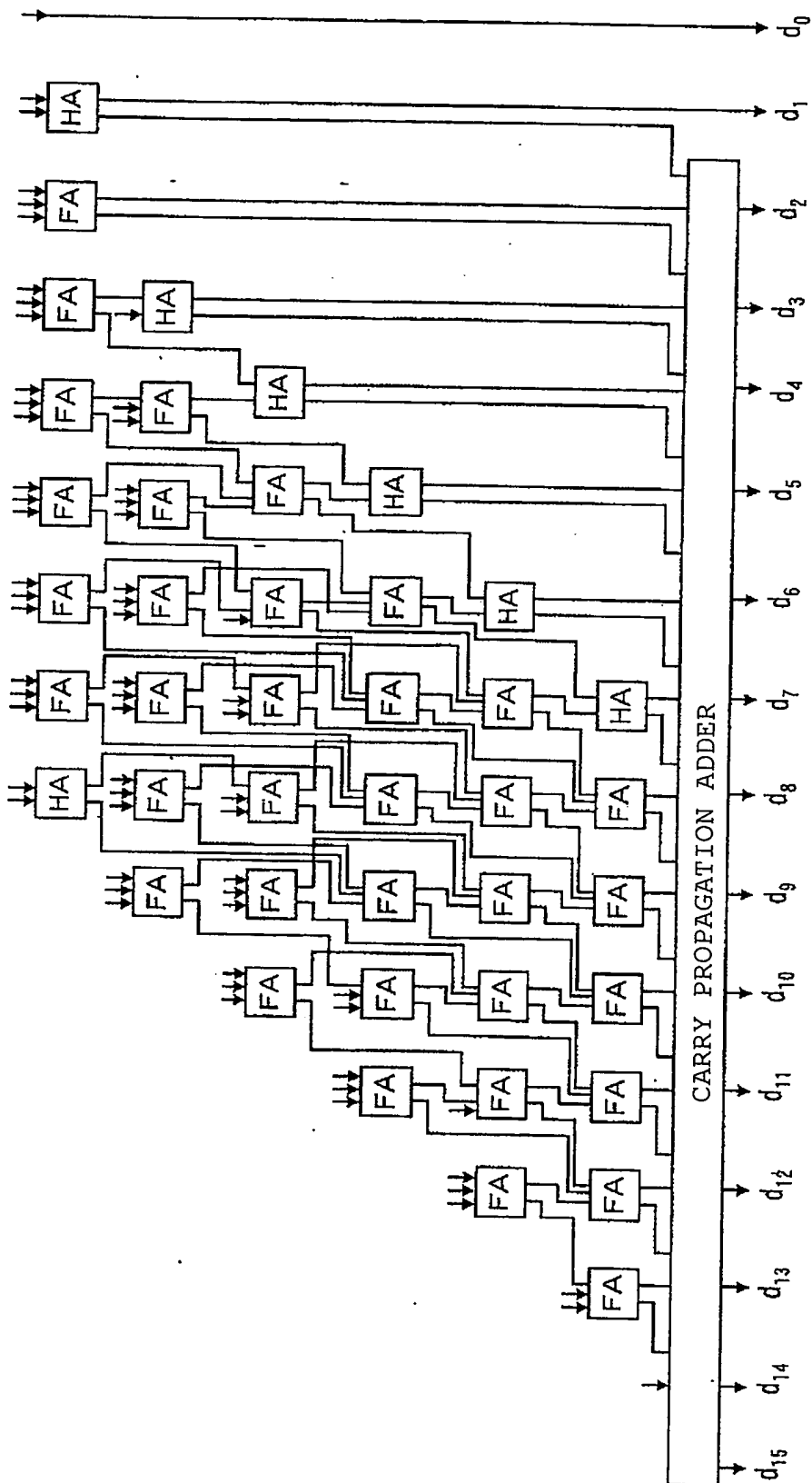
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FIG. 1



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FIG. 2



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FIG. 3



HALF ADDER

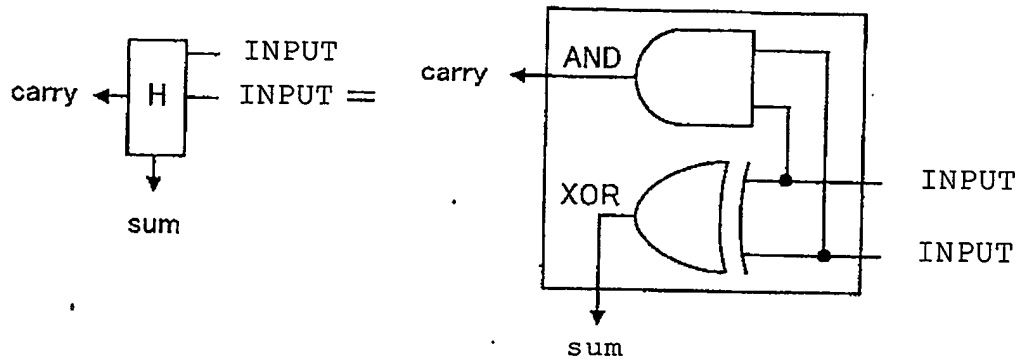


FIG. 5

FULL ADDER

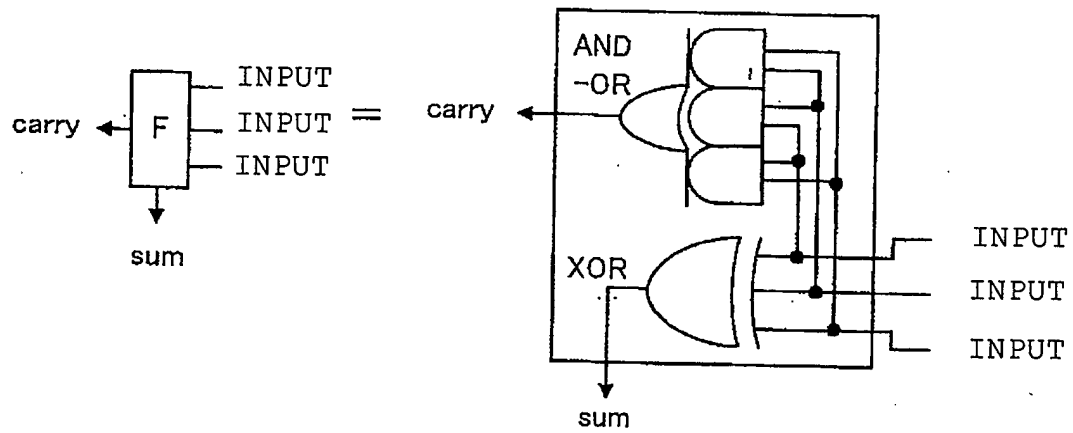
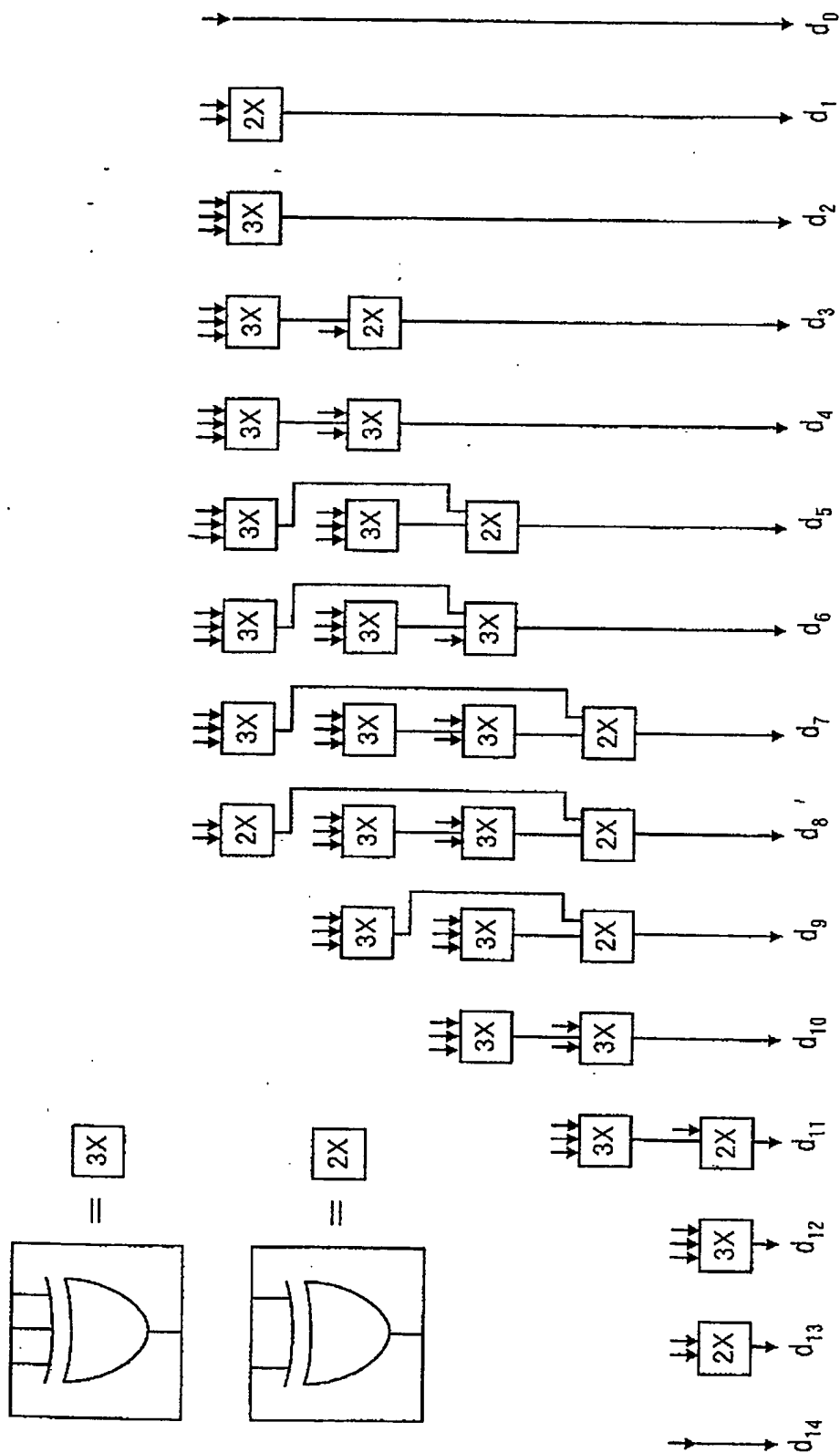
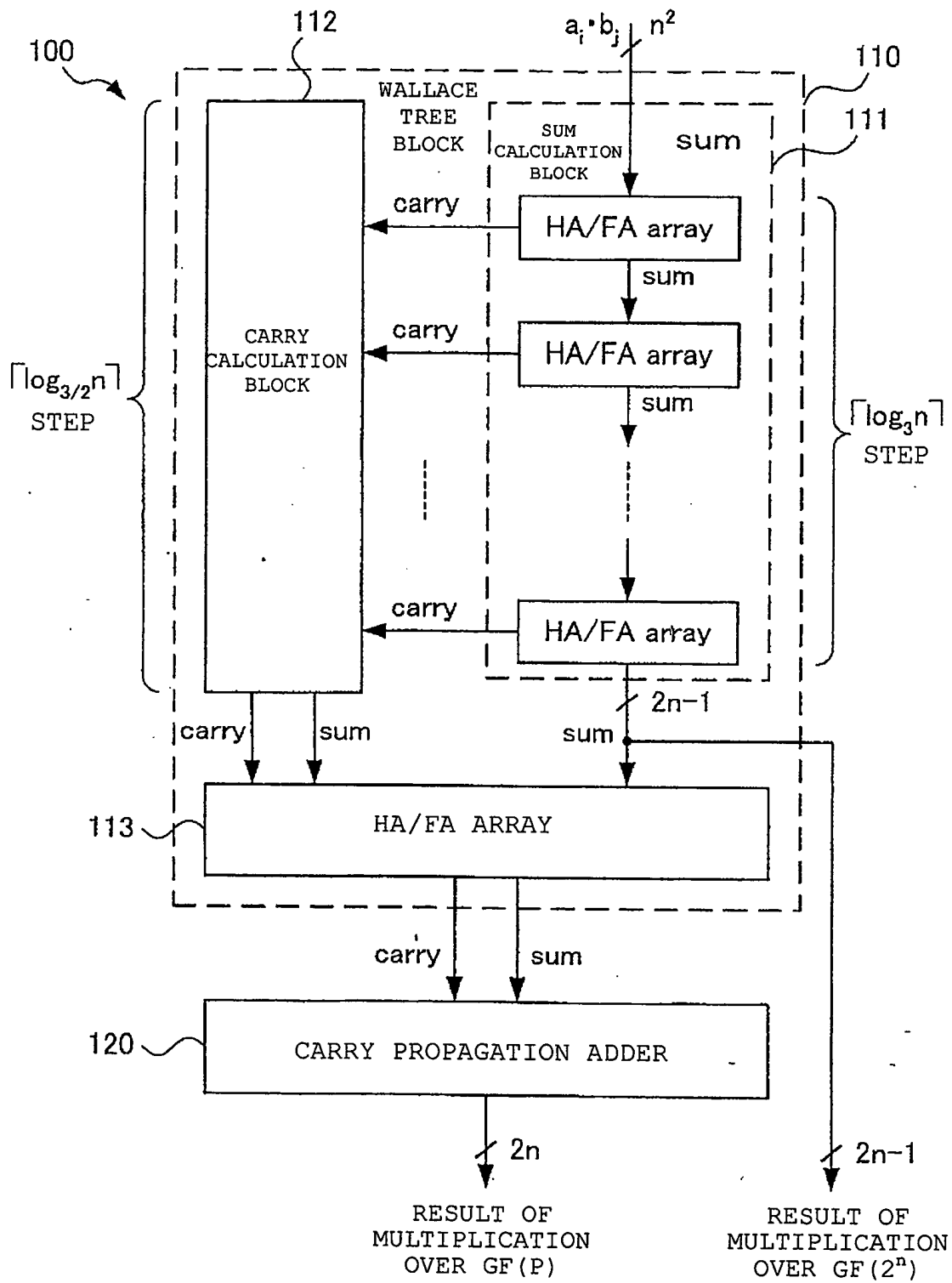


FIG. 6



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FIG. 7



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FIG. 8

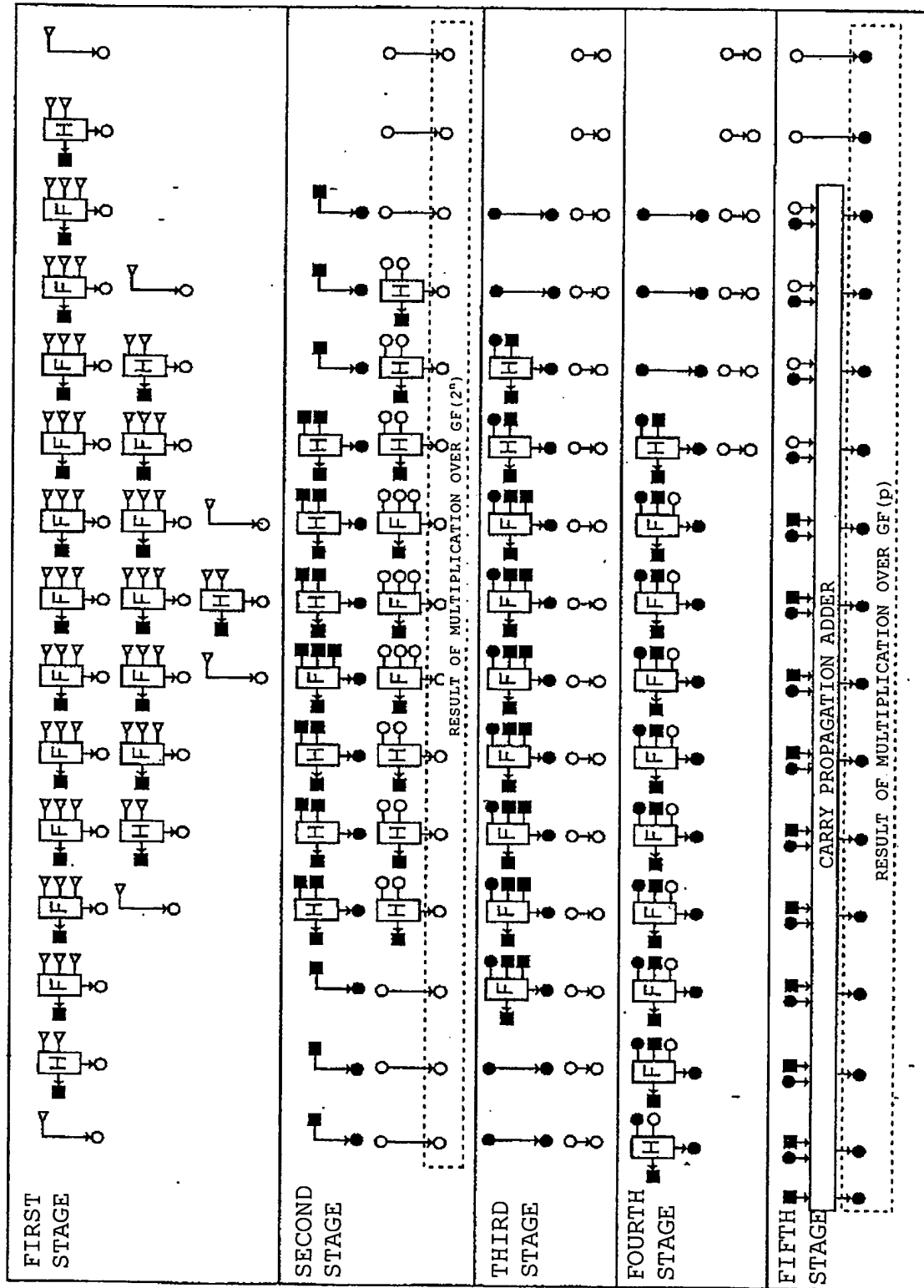


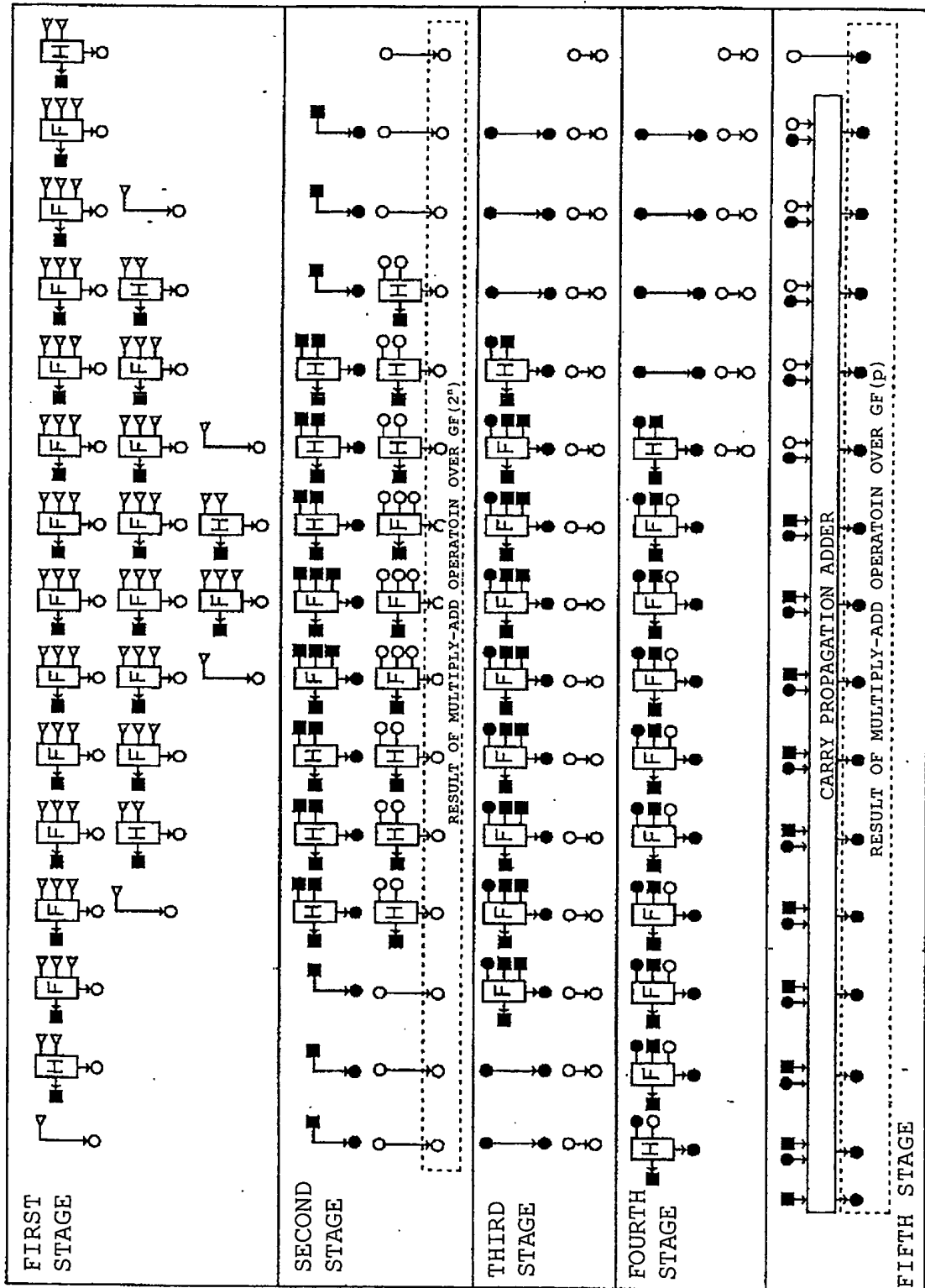


FIG. 9

The diagram illustrates the addition and multiplication of two 8-bit numbers,  $a_7 a_6 a_5 a_4 a_3 a_2 a_1 a_0$  and  $b_7 b_6 b_5 b_4 b_3 b_2 b_1 b_0$ .

**Addition:** The sum  $c_7 c_6 c_5 c_4 c_3 c_2 c_1 c_0$  is calculated by adding the two numbers. The carry bits are shown in the cells below the sum.

**Multiplication:** The product  $d_{15} d_{14} d_{13} d_{12} d_{11} d_{10} d_9 d_8 d_7 d_6 d_5 d_4 d_3 d_2 d_1 d_0$  is calculated by multiplying the two numbers. The partial products are shown in the cells below the product.



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FIG. 11

